

UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Guenter Ries

Application Number: Unassigned

Filing Date: Concurrently Herewith

Group Art Unit:

Examiner:

Title: LINEAR DRIVE DEVICE WITH A MAGNET YOKE BODY
AND A PERMANENT MAGNETIC ARMATURE

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with 37 C.F.R. 1.98, I am submitting a completed "INFORMATION DISCLOSURE STATEMENT BY APPLICANT" (*Form PTO/SB/08A*) with patents and/or publications as delineated therein attached.

JP 2000 253640 discloses that a linear vibration motor is provided with a stator core constituted of a first magnetic material core having a coil and a second magnetic material core which is arranged facing the core interposing a magnetic air gap, and a movable magnet body which is arranged in the magnetic air gap and capable of displacement in the axial direction. The movable magnet body consists of permanent magnets divided into a plurality of segments and insulating thin plates arranged between the divided magnets.

JP 2000 224829 discloses that a linear vibration actuator is equipped with a first magnetic material yoke which has both end portions and a central part lower than the end portions and forms an almost E-shaped section, an exciting coil wound around the central part of the yoke, a second magnetic material yoke which magnetically couples with both end portions of the first yoke, and closes the gap of a magnetic circuit and has an I-shaped section; and a movable magnet body arranged in a magnetic air gap formed by the first yoke and the second yoke. By this constitution, a gap does not exist in the magnetic circuit formed by the first yoke and the second yoke, so that magnetic resistance is decreased and the amount of a magnet moving in the magnetic air gap can be reduced.

CH 624 522 discloses that to obtain accurate and fast transformation of an electrical signal into a linear displacement, low bulk and simple construction, the transducer comprises

a ferromagnetic enclosure, two coils wound on two portions of the enclosure, and a magnet which can move linearly under the action of a force due to the magnetic field created by the current traversing the coils, the coils being arranged so that the direction and the strength of the current passing through them determine the direction and the value of the displacement of the magnet. This transducer can be used to control oscillating movements or as a positioning member.

EP 0 915 553 discloses that a linear motor includes stator teeth which from separately or combined in blocks, a stator lamination stack. Prefabricated coils are provided used as phased-fraction slot windings degenerated to tooth-coils. The stator teeth are equipped with coils which are fixed on the respective stator teeth and stator laminations stack. The complete stator lamination stack is assembled from the stator teeth joined mechanically and magnetically in sections. The teeth form, in blocks, an electrically and mechanically independent line-module.

DE 102 25 024 discloses a drive mechanism for the generation of the oscillating motion of at least one slave component in a small electrical appliance comprising a coil (4) for the generation of magnetic field which originates from an initial drive component (1) and acts on a second moveable drive component (2) in the small electrical appliance, such that the second drive component (2) is displaced in an oscillating motion, characterized in that the first drive component (1) which imparts phase-opposition oscillating motion to the second drive component (2) is arranged in a moveable position in the small electrical appliance.

JP 2002 031054 discloses that the linear compressor includes a motor unit having a linear motion part for driving a piston shaft in the axial direction and a cylinder to receive a piston fixed to the shaft outside the motor unit about its axial direction so that a compression chamber is formed, and five ring-shaped leaf springs are installed around the cylinder in such a way as apart at certain intervals in the axial direction, and the inner edges of these leaf springs are screwed fast to a disc part of the linear motion part while their outer edges are fixed to a stationary housing of the motor unit.

JP 62 070673 discloses that an air gap is provided at the center of a core so as to allow exciting coils and to be installed. And a moving part is provided movably to the direction normal to the side face of the core allowing permanent magnets and to be secured with a certain space apart. In this case, the permanent magnets and are designed not to face the entire face of a magnetic pole at the air gap for the whole amplitude range of the moving part. This configuration allows a driving force to be efficiently produced.

JP 59 159657 discloses that wiring conductors are disposed in an inlaid net in a slot for isolating between poles. In case of multipole with ends in multipole axial direction, the conductors surround the poles, one wiring passage is in zigzag shape, and the directions of currents flowed through multiple conductors in one slot are all in one direction. Accordingly, when the currents flowed in the direction of an arrow, the poles is magnetized in S polarity, and the poles are magnetized in N polarity, and they are reversely polarized when the current is flowed in reverse direction. The areas of the poles are reduced, the depths of the slots are increased, wired in multilayers, thereby reducing the sectional area of the magnetic path. In this manner, a stator and a movable element are associated, thereby reducing the weight and size and efficiently feeding stepwisely them.

If no translation of pertinent portions of any foreign language patents or publications mentioned within the "INFORMATION DISCLOSURE STATEMENT BY APPLICANT" is included with the aforementioned copies of those applications, patents and/or publications, it is because no existing translation is readily available to the Applicant. As per the Notice in 1273 OG 55 (August 5, 2003) no copies of any above-mentioned US patents and US patent application publications are submitted for this application which was filed after June 30, 2003.

Respectfully submitted



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Registration No. 48,557

August 29, 2006

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10/591 086
IAP9 Rec'd PCT/PTO 29 AUG 2006

PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known

Application Number	Unassigned
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Filing Date	Concurrently Herewith
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First Named Inventor	Guenter Ries
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Art Unit

Examiner Name

Attorney Docket Number	2005P00312WOUS
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Sheet	1	of	2
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U. S. PATENT DOCUMENTS

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FOREIGN PATENT DOCUMENTS

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Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ²
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
		JP 2000 253640	09/14/2000	HITOO TOGASHI et al		
		JP 2000 224829	08/11/2000	HITOO TOGASHI		
		CH 624 522	07/31/1981	MARCEL JUFER		
		EP 0 915 553	05/12/1999	DR GERHARD HUTH		
		GB 2 362 433	11/21/2001	A. HASHIMOTO et al		✓
		DE 102 25 024	12/24/2003	BERNHARD KRAUS et		

Examiner Signature		Date Considered	
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.¹ Applicant's unique citation designation number (optional).² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04.³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible.⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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(Use as many sheets as necessary)

Sheet	2	of	2
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Application Number	Unassigned
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Art Unit	
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Attorney Docket Number	2005P00312WOUS

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FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ²
		Country Code ³ *Number ⁴ *Kind Code ⁵ (if known)				
		EP 1 089 418	04/04/2001	SHINICHIRO KAWANO		✓
		JP 2002 31054	01/31/2002	HOJO MIKIO		
		JP 62 70673	04/01/1987	MARUYAMA TOSHIO et al.		
		JP 59 159657	09/10/1984	UENO YOSHIYUKI		
		International Search Report PCT/EP2005/051006				✓

Date
Considered

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